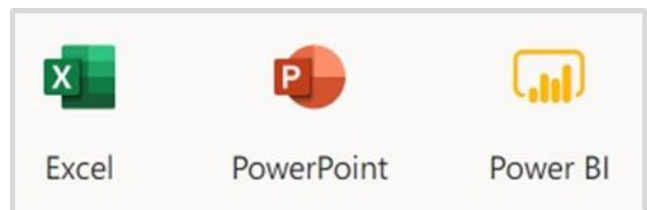# Shaheed College of Business Studies, University of Delhi
Grade "A+" Accredited by NAAC with a CGPA of 3.46

Business Intelligence, Data Visualization and Automation

(Create a data-driven culture with business intelligence)

**SHAHEED SUKHDEV COLLEGE OF BUSINESS STUDIES
(UNIVERSITY OF DELHI)
Dr. KN Katju Marg, Sec-16, Rohini, Delhi-110089**

About Course:

Short duration Course on **"Business Intelligence, Data Visualization and Automation" -**75 hours (3-4 Months) weekend course launched by "Shaheed Sukhdev College of Business Studies (SSCBS): An esteemed college of University of Delhi".

Class timings:
During the Weekends and Vacations.

Duration of the course:
75 Hours (over 3-4 Months).

Eligibility:
Anyone who is pursuing Graduation or passed class 12th or equivalent.

Forms Availability:
Admission form will be available on the college website (http://sscbsdu.ac.in). Download the Application form (photocopy of downloaded form may be used).

Total Fees:
18,200/-(Course fee 18,000/-, Application fee 200/-).

Mode of Payment: By Net Banking, Cheque, and Credit Card/Debit Card.

Net Banking/ Cheque details:

Account Name:	Principal SSCBS students Society A/C
Bank:	State Bank of India
Account Number:	35810781108
IFS Code:	SBIN0011550
MICR:	110002303
Branch:	(11550)- Pascon Building Garg Trade Centre, Sector-11, Rohini, New Delhi-110085

Students need to deposit online transaction receipt of Total Fees 18,200/-(Course fee 18,000/-, Application fee 200/-) with application form and supporting documents.

Documents required at the time of Admission: Attach Photocopy of Mark sheet & Certificates of Class 12th or above, Online Fees Deposit Receipt (If fees paid online) and Aadhar card / Identity Proof.

Timings of Application form submission in the college: Forms will be submitted in Room No-103 Monday to Friday during working Hours (10:00 am to 4:00 pm).
Number of seats: 40-50 students per batch.

Admission Notice: The date for each new batch will be notified on the College website (http://sscbsdu.ac.in).

Certification: Certificate shall be provided by SSCBS

Examinations:
(i) Project work - Assigned and Evaluated by **Faculty.**
(ii) End term Exam - On line exam conducted by **SSCBS**
Note- Date of exams shall be notified later during the course. Once notified, no change of date will be allowed for any candidate.

Requisites for course completion: Securing at least 50% marks in each of the followings;

(i) Project Work,
(ii) End Term Examination.

What if candidate is unable to secure the requisite percentage?
The candidate would be given another opportunity to meet the above-mentioned requisite. If the same is not met, then the candidate can avail of a participation certificate or appear for the exam along with the next batch of students by paying the examination fees/project evaluation fee to SSCBS.

When the certificate will be awarded:
After successful completion of Internal Examination, Project work and End Term Examination candidates would be issued a certificate by SSCBS

Course Coordinators:
Dr. Neeraj Kumar Sehrawat -(nrjsehrawat@sscbsdu.ac.in , +91-7015448335)
Mr. Amit Kumar-(amit.catlog@sscbsdu.ac.in , 9958161303)

Coordinator:
Mr Deepak Tiwari – (businessintelligence@sscbsdu.ac.in, 8744045455)

COURSE CONTENT

ADVANCED EXCEL – 15 HOURS

OBJECTIVE:
Learn the Number 1 Programming Language in the world, used by 750 million people

LEARNING OUTCOMES:
Learn Basic > Intermediate > Advanced level topics
Learn industry challenges faced in day-to-day tasks
Perform data cleaning, extract the right day and create dashboards

MODULE	TOPIC
DATA CLEANING AND PROCESSING	Excel shortcuts, Tips and Tricks Text to Columns, Flash Fill UPPER, LOWER, PROPER, FIND, LEN, CONCATENATE, LEFT, RIGHT, MID Find and Replace
ADVANCED DATA CLEANING AND PROCESSING	REPT, SUBSTITUTE, REPLACE, TEXTJOIN, CONCAT, TEXT, TRIM, CLEAN Advanced Find and Replace
FORMULAS AND FUNCTIONS	SUM, AVERAGE, COUNT, COUNTA, MAX, MIN IF, SUMIF, COUNTIF
ADVANCED FUNCTIONS	SUBTOTAL, AGGREGATE IFS, OPERATORS (AND, OR. NOT), SUMIFS, COUNTIFS, AVERAGEIFS, SUMPRODUCT Formula Auditing – Evaluation, Debugging, Tracing Errors
BASIC VLOOKUP	Concept of VLOOKUP – Approximate and Exact Match Handling Errors
ADVANCED LOOKUP	INDEX and MATCH – VLOOKUP to the left of the data XLOOKUP, OFFSET, INDIRECT VLOOKUP with unclean data VLOOKUP for duplicate values
PIVOT TABLES AND CHARTS	Simple Summaries and Analysis
ADVANCED PIVOT TABLES	GETPIVOTDATA Generate Multiple Reports in Single Click Slicers and Timeline Dashboards
BASIC CHARTS	Column, Bar, Line, Area, Pie, Donut
ADVANCED CHARTS	Scatter, 3D Map, Radar, Treemap, Sunburst, Sparklines, Pie of Pie, Bar of Pie, Combo Save chart templates Connect to PowerPoint
HANDLING DATES	Fixing incorrect dates DATE, DAY, MONTH, YEAR
ADVANCED DATE FUNCTIONS	EDATE, EOMONTH, WEEKDAY, WEEKNUM, DATEDIF NETWORKDAYS, WORKDAY
CONDITIONAL FORMATTING	Highlight, Top / Bottom N, Heatmaps, Icon Sets
ADVANCED CONDITIONAL FORMATTING	Conditional Formatting with Rules
PRACTICAL STATISTICS	Descriptive Statistics Percentile and Quartiles Box-Whisker Chart

	Correlation
	Regression
	Forecasting
DYNAMIC ARRAYS	Introduction to dynamic array formulas
	SEQUENCE, OFFSET, SORT, SORTBY, FILTER, UNIQUE, LET, LAMBDA

VBA AUTOMATION – 5 HOURS

OBJECTIVE:
Learn the programming backend of Excel

LEARNING OUTCOMES:
Automate tasks, reduce TAT, improve efficiency
Create UserForms
An introduction to RPA (Robotic Process Automation)

MODULE	TOPIC
INTRODUCTION TO VBA	Setting up your environment
	Excel object library
	Write and run your first code
	Data types
	Variables
	If else statements
	Loops
	Built in boxes – MessageBox, InputBox
	Recording Macros – automate your tasks
	Create your own UserForm

POWERPOINT – 10 HOURS

OBJECTIVE:
Learn to create stunning presentations and present business insights

LEARNING OUTCOMES:
Basics of data storytelling
Using Images, Videos, Shapes, Colors effectively
Connecting Excel to PowerPoint

MODULE	TOPIC
Navigation + Shortcuts	Navigating Interface
	QAT
	Custom Tab
	Ribbon Keyboard shortcuts
	Sections
	Slide Sorter
Starting with Templates	Canva / YouExec / Inbuilt
	Slide Master
	Reading Reports
Working with Shapes	Grid Guide Remove
	Alignment
	Change Size
	Layers, Lock and Selection Pane
	Transparency
	Custom Shapes
	Duplicate
	Group
	Rotation

	Merge Gradients
Using Colors Effectively	Why are colors important, Color Psychology Ecological Preference Color Harmony What Colors Mean Color Symbolism Online Tools PowerPoint Tools
Process Charts	SmartArt Excalidraw Lucid
Working with Images	Get Free Images - Pexels Pixabay Types: PNG JPEG GIF Remove Background Changing Format Reduce Size 3D Models Photo Album
Working with Icons	Get Free Icons + Inbuilt Icons SVG Types of Icons
Working with Text	Dictate Synonyms Translate TextBox Formatting - Gradient, 3D Rotation Shape with Textbox Remove Margin
How Fonts work	Typography Samples and Use Cases Download Free Fonts
Working with Tables	Copy from Excel Improve look Examples from Industry Wingdings
Morph, Animation and Zoom Effect	Morph - Icons Morph - Progress Bar Morph - Bar Animation with Text Animation with Shape - Gear Zoom
Working with Charts	Copy from Excel Animate Charts
Working with Video and Audio	Insert Audio and Video Record and Insert Audio and Video

Export Options, Protect Options	PDF Video GIF PPSX Image Protect Options - All 3
Presenting	Presenter Mode Custom Slide Show Shortcuts while presenting Slide Transition

POWER BI – BASICS OF DATA VISUALIZATION – 25 HOURS

OBJECTIVE:
Learn the Number 1 Business Intelligence tool used worldwide

LEARNING OUTCOMES:
Create dynamic dashboards
Use no-code AI and ML

Module 1 – 10 Hours DATA PREPARATION	Connecting to different data sets
	Basic data prep and model on Power Query
	Drill down and Tooltip
	Ai visuals (Q&A, Analyze, Decomposition)
	Inbuilt visuals
Module 2 – 10 Hours DATA VISUALIZATION AND DASHBOARDS	Custom visuals
	Visualization as a Tooltip
	Learn from existing reports
	Final dashboard – putting it together Filter, slicer, bookmarks, buttons
Module 3 – 5 Hours PERFORMING COMPUTATIONS	Date tables
	Relationship
	Basic DAX
	Merge and append
	Conditional columns
	Custom calculations
	Column from examples

POWER BI – ETL AND DATA MODELING – 15 HOURS

OBJECTIVE:
Master data cleaning and modelling

LEARNING OUTCOMES:
Learn ETL (Power Query) + DAX (Data Modelling)

Module 1 – 5 Hours **ADVANCED DATA CLEANING**	**Advanced Editor**
	Advanced Merge and Append
	Reference and Duplicate Query
	Combine Multiple Sheets and Multiple Workbooks
	Split Into Rows / Combine into Row
Module 2 – 5 Hours **ADVANCED COMPUTATIONS AND TIME INTELLIGENCE FUNCTIONS**	**Introduction to DAX**
	Calculated Column vs Measures
	CALCULATE, FILTER, ALL, RELATED, UNION
	AVERAGEX, SUMX, SUMMARIZE
	DATE TABLE AND TIME INTELLIGENCE FUNCTIONS
	TOPN, RANK, CONCATENATEX
	DAX PATTERNS
Module 3 – 3 Hours **ADVANCED POWER QUERY**	**POWER QUERY PARAMETERS (M)**
	CUSTOM FUNCTIONS (M)
	CUSTOM DATE TABLES (M)
	WHAT IF SCENARIO (DAX)
Module 4 – 2 Hours **CUSTOMIZING YOUR VISUALIZATIONS**	**ADVANCED VISUALIZATIONS**
	CUSTOMIZING VISUALIZATIONS AND TOOLTIPS

TABLEAU – 5 HOURS

OBJECTIVE:
Learn to create stunning data visualization

LEARNING OUTCOMES:
Introduction to Dimensions and Measures
Create dynamic dashboards
Create calculations in Tableau

Getting Data Ready
Dimensions and Measures
Understand Marks Card
Visualizations – Heat map, Tables, Maps, Bar, Column, Pie
Format Visualizations
Creating Custom Charts
Create Calculated Fields
Create Parameters
Create Story and Dashboards